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ABSTRACT

The usefulness of providing specific information and a progress/feedback mechanism to control utility usage in community-based, halfway houses for dependent-neglected and for delinquent adolescents was explored. The investigation was carried out in a random sample of 12 houses of an Arizona facility, divided into equivalent groups of three houses. The observation lasted 11 months, with baseline periods varying from 6-9 months. Utility unit changes were measured every three days. Each resident in the test groups (schedules varied) was given a manual describing conservation measures, and passed a quiz on this material. In the feedback period each house was notified of increase/decrease changes in utility usage levels. Conditions and time periods varied according to group assignments. Patterns of usage and usage means for each group were analyzed. Percentage-change analyses were employed to detect any differences. Both manual and feedback conditions were effective in reducing utility usage from baseline levels. Change was particularly evident in groups with initially high usage patterns. (Author)

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Effect of Feedback and Training on Utility Usage Among Adolescent Delinquents

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Effect of Feedback and Training on Utility Usage
Among Adolescent Delinquents

Abstract

Studies of delinquents have shown that they lack awareness and understanding of the consequences of their actions, and of realistic factors related to the environment and economics of their care. This study investigated the usefulness of providing specific information and a progress/feedback mechanism to control utility usage (electricity and natural gas) in community-based, halfway houses for dependent-neglected, and for delinquent adolescents. The investigation was carried out in a random sample of 12 houses of the facility, located in upper-middle class socio-economic areas of Tucson, Arizona. The sample was divided into equivalent groups of three houses. Each unit housed six adolescents (male and female, separately) and two foster parents (male and female). It was hypothesized that by making all residents aware of usage patterns and the value of utilities that overall usage levels could be reduced.

The observation lasted 11 months, with baseline periods varying from six to nine months. During this time, utility unit changes were measured every three days. Each resident in the test groups (schedules varied) was given a manual describing aspects of utility usage (e.g. conservation measures) and passed a quiz on this material. Subsequently in the feedback period, each house was notified of increase/decrease changes in utility usage levels. Conditions and time periods varied according to group assignment. Patterns of utility usage for each house as well as usage means ($\bar{X}$) for each group were analyzed across the observation period. Percentage-change analyses

were employed to detect any differences among the various conditions and groups. It was found that both manual and feedback conditions were effective in reducing utility usage from baseline levels. Manual-feedback effectiveness differences were also noted. Change was particularly evident in groups with initially high usage patterns. It was concluded that intervention and monitoring of utility usage of adolescents helps to increase their awareness of its importance and reduce use/cost of care.

Effect of Feedback and Training on Utility Usage
Among Adolescent Delinquents

Delinquent adolescents have been shown to perform a variety of maladaptive or inappropriate behaviors in a variety of settings (Tharp & Wetzel, 1970; Phillips, Phillips, Wolf, & Fixsen, 1973). An explanation which could account for many of these behaviors is the lack of understanding of the relationship between behavior and its consequences. This lack of insight becomes an acute problem in the "halfway house" treatment modality in which those receiving care reside in a community-based location rather than in a centralized facility (e. g. prison, reform school, etc.) and are subject to societal contingencies/norms. In such a situation youths have frequent and prolonged contact with numerous community facilities potentially increasing the range of problematical interactions.

A major area of concern in any treatment situation is the expense involved in its maintenance. The importance of this factor is apparent with regard to utility consumption. In contemporary society with its growing concern for natural resources (renewable and non-renewable), a successful program designed for the control of the level and/or pattern of such usage would have intrinsic value, particularly in the delinquent/dependent-neglected adolescent population.

Attempts have been made to determine the relative merits of several methods directed at utility usage control. Basically these procedures involved a means of communication of related information ["energy-saving practices" manual (Winett and Nietzel, 1975)], a feedback mechanism [a notice indicating the number of utility units used since some previous reading (Kohlenberg, Phillips, and Proctor,

1976)], monetary payment [weekly funding for various degrees of reduced usage levels (Hayes and Cone, 1977)], as well as combinations of these factors.

The results of these investigations have shown the provision of payment ("rebate") for usage reduction to be consistently superior to each of the other variables (Kohlenberg et al., 1976; Winnett and Nietzel, 1975; Hayes and Cone, 1977), with feedback being generally superior to information. Hayes and Cone (1977) have discussed the additional value of reduction in the lowering of monthly utility rates with decreased consumption as an additional payment as well as its potential confounding effects in previous research designs. It was therefore apparent that current utility usage patterns and overall levels were subject to control mechanisms and that such control has particular merit in contemporary society. Results have indicated successful contingency management of utility consumption.

However, these projects have concentrated on the adult population. It would seem apparent that the earlier in life an individual becomes aware of the importance of the conservation of resources, the higher will be his/her immediate personal reward as well as the somewhat removed societal benefit. This would appear to be particularly valuable in the case of the delinquent or behaviorally-disordered adolescent who may fail to understand the effects of his actions of their self-control in terms of immediate and long-term consequences.

The present study was designed to address both of these issues in a relatively long-term analysis. It was hypothesized that delinquent and dependent-neglected adolescents could be made aware of the

direct effects of their reduction of utility consumption (or lack of it). It was also proposed that communication of consumption information and a feedback mechanism would have differential effects upon the overall level of usage in the residence.

Method

Subjects: 72 male and female children, ages ranging from 9-18 years, served as subjects for the present study. These youths had been court-probated either delinquent or dependent-neglected and placed in one of the halfway houses of the Centers For Youth Development and Achievement (CYDA) in Tucson, Arizona on the basis of adjudicatory status. Males and females were housed separately and each attended either public school or the special education facility of the organization. Educational levels varied, as did the length of time in the residence. A male/female house parent pair presided in each house. Children were of either Indian or Caucasian ethnic groups.

Apparatus: Materials for the study involved a manual which described various methods for energy saving (with respect to appliances, stereo, etc.) and provided rationales for each. The manual packet also included a quiz on the material presented. A copy of this packet appears in Appendix I.

A notice which specified the number of units of electricity and natural gas consumed during the period since the prior reading was the feedback mechanism. A copy of the notice appears in Appendix II.

Meters of the Tucson Gas & Electric Company recorded units of utilities consumed. The meters were located on or near each house.

The houses included in the study ranged in size from 1421-2892 square feet with an average of 1960 sq. ft.

Procedure: A sample of 12 of 26 upper-middle socio-economic class throughout Tucson, Arizona, was made on the basis of square footage area and the number of rooms. These houses were randomly placed in one of four groups in a multiple baseline design in the following manner:

1) Group I received baseline for six months at which time the manual phase was initiated. After six weeks, feedback began until the conclusion of the experiment (12 weeks).

2) Group II received baseline for seven and one-half months, the manual phase for six weeks, and then the feedback until the conclusion of the experiment (six weeks).

3) Group III received baseline for 9 months then the manual/feedback phases simultaneously until the conclusion of the experiment (four weeks).

4) Group IV received baseline for the entire experimental period.

Due to the various locations of the houses involved, a standard inspection tour was arranged. Meter readings were taken every three days in an effort to detect more immediately than the typical monthly notice any changes in the usage levels. Weekdays and weekends were included. The meter reading tour began at 10 a.m. and required approximately three hours to complete. This time period was selected because no residents would be at the houses, to prevent any communication concerning the experimental purposes and/or findings. It should

be pointed out that inspectors and organization personnel (Maintenance) made frequent visits to all CYDA housses. If an interaction between the data collector and student(s) and/or parents did occur no suspicion on the residents' parts would be raised. Recordings of the readings (electric and natural gas) were taken and units of usage since the previous reading were noted.

Baseline Phase: Meter readings were taken in the manner noted above. No instruction or feedback concerning overall utility usage was given to house residents.

Manual Phase: The teaching parents were asked to meet with the experimenter (E) at the CYDA main office. During the meeting, E introduced the manual (See Appendix I) and explained its purpose, i.e. to instruct in the intelligent use of electricity and natural gas. No mention was made of the meter readings being taken or monthly usage bills received at the main office. Parents were asked to read the manual with the understanding that they would be asked to pass a quiz on its contents on the following day. E administered the quiz in the afternoon of the following day during their regular study hall. In the case of failure on the quiz, parents would review manual material with the student(s) and readminister the quiz. Quiz results were then reported to E. Readings were commenced in the manual phase when all members of the household and read the manual and passed the quiz to criterion. (90%)

Feedback Phase: At the specified point, E initiated the feedback phase. Upon taking the reading in the manner described above, the

collector recorded the electricity and natural gas units used since the previous reading. He then specified on a feedback notice (See Appendix II) the current usage and whether that constituted an increase/decrease in usage levels. The notice was then placed in the mailbox of the house. This procedure was followed for every three-day reading during this phase. Parents were asked to initial the notice and to return it at the end of the current week to E for permanent records. In addition, E communicated with the teaching parents by telephone on the evening of the reading to ensure receipt of the notice and to repeat its contents. Parents were also instructed to communicate current rate of utility usage to the children and to remind them of the importance of conscientiousness in use.

Manual/Feedback Phase: This phase involved the administration of the manual/quiz and feedback notification in the manners described above during the same experimental period.

Meter readings were then collected for group compilation. Further, another individual trained in reading meters joined the primary data collector during the regular inspection tour once per month, as a reliability check.

Results

The questions to be analyzed were: 1) By making delinquent and dependent-neglected adolescents aware of the means of utility usage control, as well as by providing a feedback mechanism to monitor progress. overall levels of consumption of electricity and natural gas would be reduced; 2) A manual describing methods of energy conservation and a feedback mechanism will have differential effects upon overall levels of usage.

Mean ($\bar{X}$) values of natural gas and electricity consumption for each of the groups in the appropriate conditions are presented in Table 1.

Insert Table 1 About Here

Although the groups were composed of comparably-sized hoses, the range for both electricity (47.9-188.8 Kw/H) and natural gas (3.0-29.78 cu. in.) was large. The highest overall usage rate of electricity was found in Group II ($\bar{X}$ = 172.8), followed by Group I ($\bar{X}$ = 83.4) with Group III ($\bar{X}$ = 47.94) and Group IV ($\bar{X}$ = 47.9) functionally equivalent. With respect to natural gas, the highest usage rate was found in Group I ($\bar{X}$ = 13.66), followed by Group IV ($\bar{X}$ = 8.33), Group II ($\bar{X}$ = 5.28), and Group III ($\bar{X}$ = 8.33). Due to the interactional nature of these results, it was difficult to draw any consistent conclusions concerning usage patterns with respect to each individual house.

It was clear for the experimental groups through all but one condition (Group III, Electricity, Feedback) that consumption level was decreased through the use of the manual and feedback procedures. The change rate (by percentage) for electricity and natural gas in

Table 1

Mean ($\bar{X}$) Utility Consumption During Three Experimental Periods Across Four Groups Electricity in Kilowatt-Hours and Natural Gas in Cubic Inches

		Baseline	Manual	Feedback	Total
Group I	Elec.	86.6	73.9	89.7	83.4
	Gas	29.78	6.3	4.9	13.66
Group II	Elec.	188.8	175.36	154.25	172.8
	Gas	9.38	3.45	3.0	5.28
			Manual/Feedback		
Group III	Elec.	53.21	42.67		47.94
	Gas	5.8	2.33		4.07
Group IV	Elec.	47.9			47.9
	Gas	8.33			8.33

Table 2

Rate of Change in Utility Consumption During Three Experimental Phases Across Four Groups Measured in Percentages

		Electricity	Gas	Combined
Gr. I	Base.to Man.	-15	-79	-94
	Base.to Feed.	3.5	-84	-80.5
	Man. to Feed.	18	-24	- 6.0
Gr. II	Base.to Man.	- 8	-64	-72
	Base.to Feed.	-12	-68	-80
	Man. to Feed.	-19	-13	-32
Gr.III	Base.to Man/Feed	-20	-60	-80
Gr. IV	Base. Throughout	---	---	---

progression from baseline through the manual phase to the reception of feedback has been presented in Table 2.

Insert Table 2 About Here

A negative percentage value indicates a decrease in consumption whereas a positive value indicates an increase as the conditions change. From Table 2, data indicate the effects of control mechanisms to be more effective in consumption of natural gas, with decreases in all groups through all conditions. Decreases ranged from -13% (Group II, Manual to Feedback) to -84% (Group I, Baseline to Feedback). There was less change found in electricity consumption rate, with decreases ranging from 8% (Group II, Baseline to Manual) to 20% (Group III, Baseline to Manual/Feedback). It should also be noted that there was an observed increase in usage levels in Group I (3.5%, Baseline to Feedback and 18%, Manual to Feedback). These were the only instances of the control mechanisms failing to show the expected effect upon the rate of consumption. When, however, electricity and natural gas rates of change were combined for all conditions, there was a decrease in usage levels indicating the overall success of the attempt to modify awareness and consumption.

With respect to differential effects of manual, feedback, and their combination, it was difficult to determine the unique contribution of each due to the experimental design. As stated, when rates of change for electricity and natural gas were combined, there was a decrease in all conditions. However, the rates of decrease brought about by the introduction of the feedback mechanism were consistently smaller than those by the introduction of the manual/

quiz, as shown by an average baseline to manual rate of 83% and manual to feedback rate of 19%. The combined manual/feedback condition (Group III) proved the most effective in bringing about change in electricity rates, though slightly less effectively relative to the other conditions in the other groups in natural gas rates.

The overall pattern of utility consumption of electricity appear in Figures 1 and 2.

Insert Figures 1 and 2 About Here

These figures provide information about the effectiveness of each of the variables. In all groups during the baseline period, there was a gradual decrease in variation as the observation period continued. This was most apparent at the beginning of the period with an overall decrease after approximately two months. Following this period, data indicated a greater levelling off as well as a decrease. These pattern characteristics were most apparent in Group III which indicated the highest overall usage throughout the observation period as well as the greatest degree of variation. Introduction of the manual brought about an immediate decrease in usage, although the effect was somewhat transitory (See Group I). Given the possibility of seasonal variation in overall levels, the feedback mechanism was successful in reducing rates over the manual (See Group II) and in restricting the progression of consumption from achieving the level of comparable periods of the year (See Group I). One of the more intriguing results was that observed in the combined manual/feedback condition (Group III). Although there was a restriction in variation upon the introduction of this condition, the overall level of

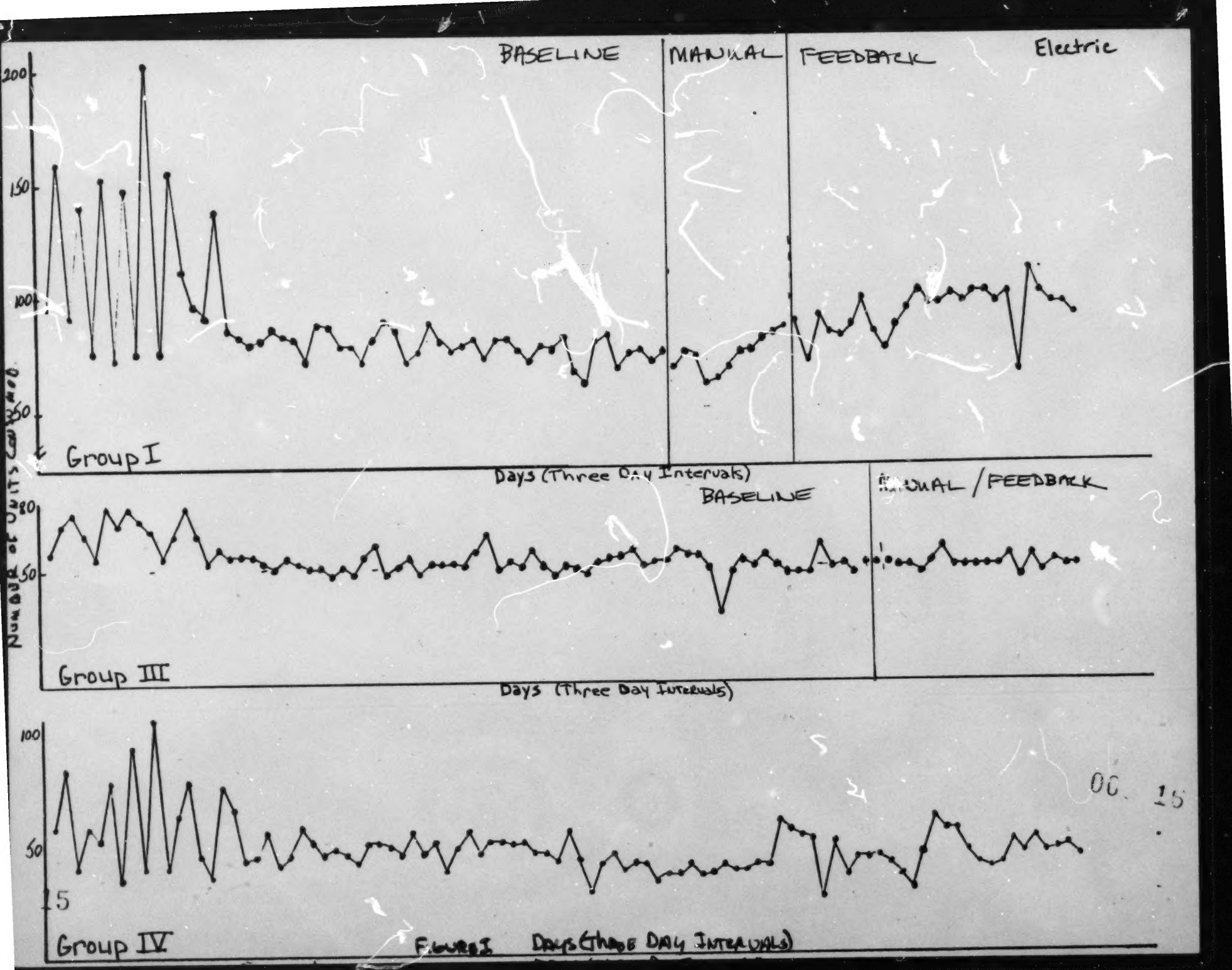


FIGURE I

00 15

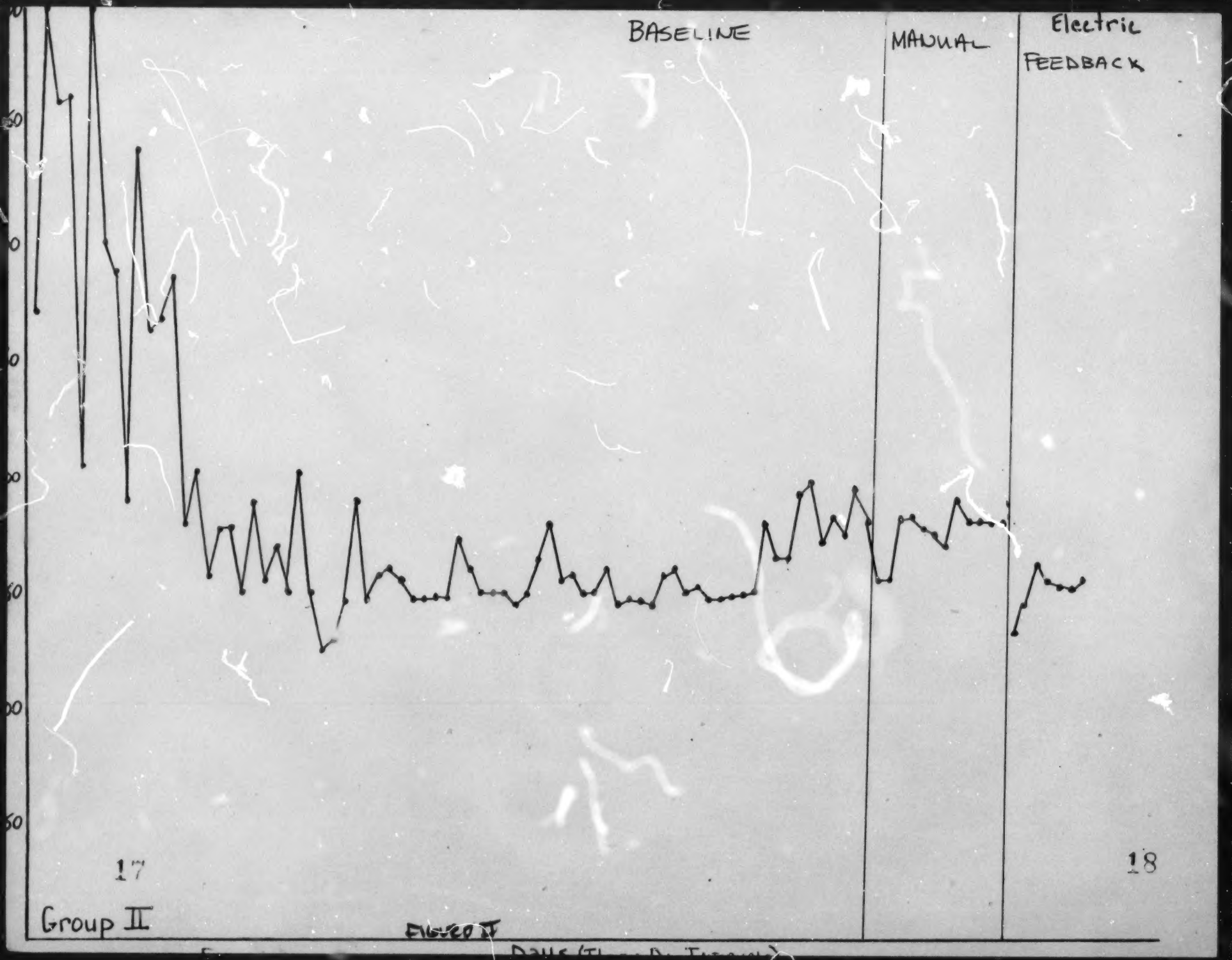


FIGURE IV

consumption showed little change. The rate did not return to the level of a previous comparable period, however, thus effecting its control.

A similar pattern was observed in the consumption of natural gas, presented in Figures 3 and 4.

Insert Figures 3 and 4 About Here

From Figures 3 and 4 it can be seen that in general there was an overall decrease in variation and level of usage following the transition from baseline to the introduction of the manual phase which is maintained through the feedback period. Although the possibility of seasonal effects remained, direct analysis of comparable periods during the observation revealed a maintenance of lower usage levels during manual, feedback, and manual/feedback periods. As stated, usage rate change due to control mechanisms was greater in natural gas than in electricity and the effect was more consistent (See Groups I and II). The combination manual/feedback phase had little effect in terms of reduction of usage levels over baseline. However, it was clear that no increases equivalent to those during the comparable period occurred (See Group III).

Reliability checks yielded an overall agreement rate of .98, insuring the consistency of the meter readings.

It has become apparent that delinquent and dependent-neglected adolescents responded to methods of utility conservation and were sensitive to the provision of feedback concerning usage levels. Although the experimental design precluded statistical interphase analyses, both were generally effective in reducing and maintaining reduction in consumption rates, relatively moreso for natural gas

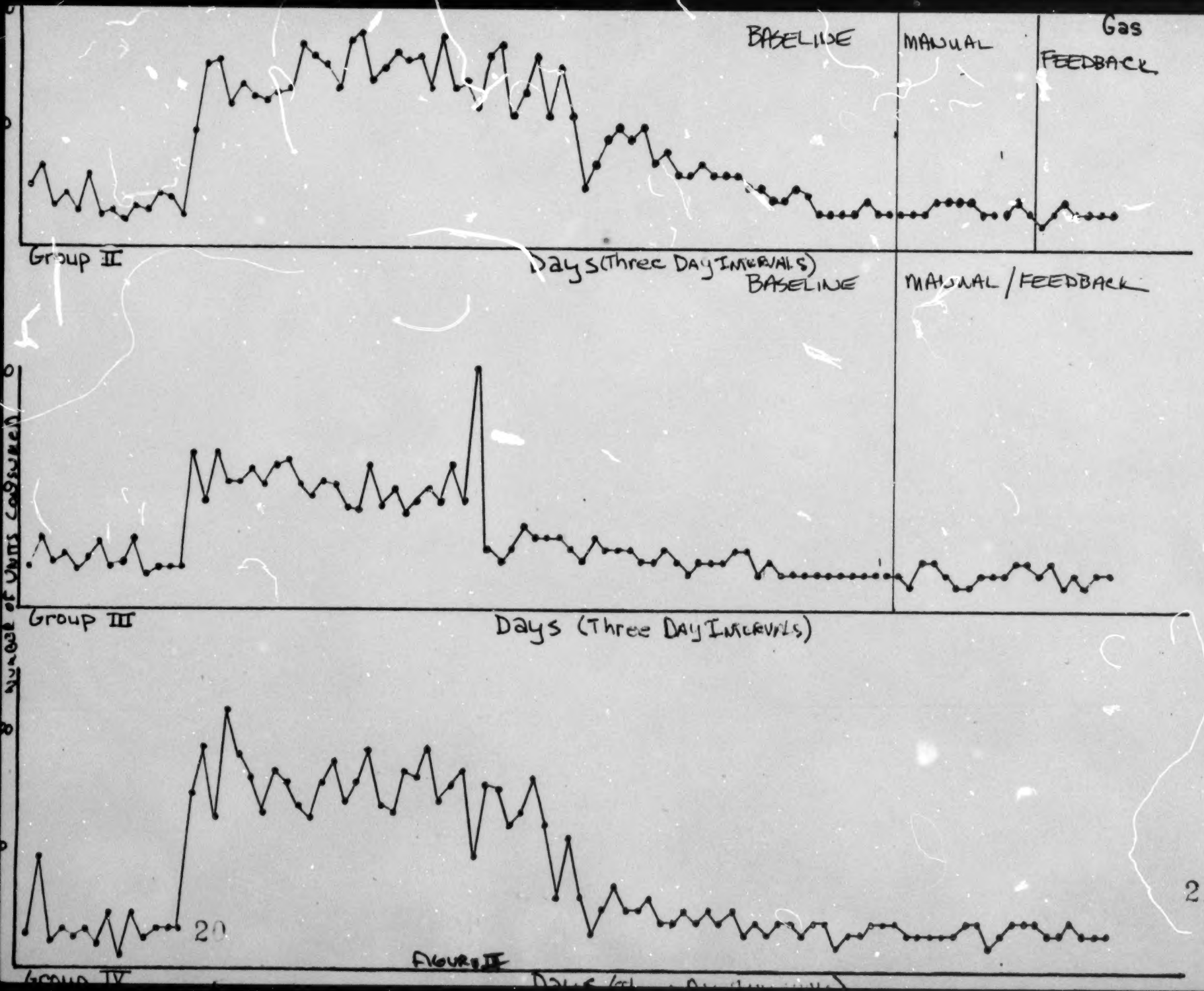
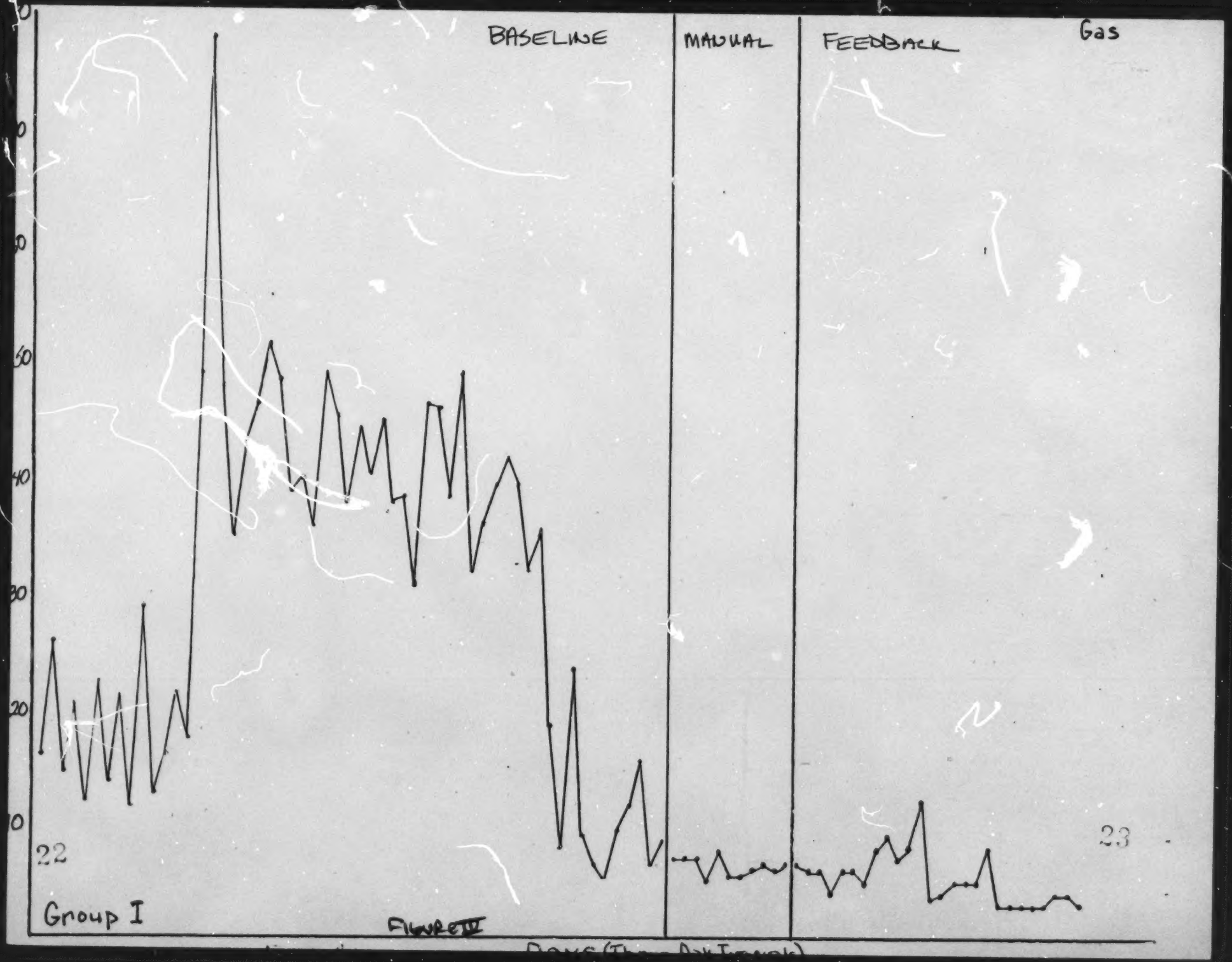

BASELINE
MANUAL
Gas
FEEDBACK
Group II
Days (Three Day Intervals)
BASELINE
MANUAL / FEEDBACK
Group III
Days (Three Day Intervals)
Group IV

FIGURE II


BASELINE
MANUAL
FEEDBACK
Gas
22
23
Group I

than for electricity. This pattern was especially evident in groups with initially high usage patterns.

Discussion

The present results have shown a manual/quiz and feedback to be successful in reducing the overall rate of electricity and natural gas consumption by delinquent and dependent-neglected adolescents residing in community-based "halfway house" child care programs.

These findings tended to be consistent with past studies (Hayes & Cone, 1977; Seaver & Patterson, 1976) employing similar classes of variables and designs. Hayes and Cone (1977) have pointed out that presentation of variables (e.g., information) have an immediate but transitory effect upon usage patterns. This was directed at the information phase in the cited study, although it can be seen at points in both manual and feedback phases in the present work. Kohlenberg et al. (1976) found that information consisting of the watt consumption of a variety of household items had very little effect upon the use which was thought to be related to the items' importance to daily living behavior patterns. Information (manual) concerning conservation of energy seems to have had a stronger effect in the present than in other research attempts. This could have been a function of the population being studied or the method/kind of information processing.

In general in the past, the feedback mechanism has been a somewhat effective technique in controlling usage, the degree of control dependent upon the amount and type employed. It has been most effective when used in conjunction with an incentive (Seaver & Patterson,

1976; Kohlenberg, et al., 1976). According to Hayes and Cone (1977), feedback had a moderate effect when employed alone but added nothing when combined with 100% payment procedures. This would give further support to the idea that it is easier for people to hold environmentally beneficial attitudes than to behave in environmentally beneficial ways (Bickman, 1973). Although it would be difficult to determine its unique effect in these results, when initiated following provision of information (manual), feedback added a certain amount of consumption control.

Past research has shown payment procedures to be the most effective control mechanism (Hayes & Cone, 1977); Kohlenberg et al., 1976). It was not employed in the present study due to the desire to moderate the expense involved. As such it was hoped that a system could be arranged which could be transferred to the control of each house to facilitate more direct behavioral self-control without the use of payment. Since the utility bills were received and paid by the administration, the method of paying all or part of the bill for reduction of consumption (Kohlenberg, et al., 1976) would probably have not had equal success. It has become apparent usage control can be accomplished without incurring additional expenses even in a population which would generally not have been concerned about issues as removed from them as energy conservation.

Due to the possibility of confounding effects due to seasonal variation, it could be argued that the observation period of this work was not sufficient to detect the actual effects of the variables. There are several methods which could perhaps be more effective in

this regard. By employing some criterion (e.g., determining the average consumption rate for comparably-sized houses from utility company statistics), present rates and increases/decreases due to the introduction of the control mechanisms could be more accurately assessed. It would also be valuable to extend the baseline period (perhaps to one year) in order to get a better measure of the effects of time of year to remove potential confounding. Related research has used more short-term analyses, e.g., two and one-half months (Kohlenberg, et al., 1976), three and one-half months (Hayes & Cone, 1977), and four months (Seaver & Patterson, 1976) which may compromise their findings. These studies also concentrated on either oil or electricity consumption thereby getting an incomplete analysis of utility usage among the subjects involved.

A difficulty which may preclude an extension of a long-term project such as the present study with the adolescent delinquent population is that such programs are situations in which both children and house parents are often times in transition. As stated, any change in either staff or student population within the experimental houses necessitated a rapid delivery of the manual/quiz, which presents a complication with regard to the continuity of treatment and research. Fortunately such problems were minimal in the present research project.

There were instances in Group III (manual/feedback) and Group I (manual) of little or no change over the baseline rates. An alternative explanation to an absence of variable effect upon consumption due to the length of the experimental period with the opportunity for similar period comparison, it was possible to show the power of the

control mechanisms in restricting the consumption rate. Upon closer investigation of house records, it was discovered in Group III (manual/feedback phase) that without any knowledge of the experimental procedures, house parents in two of the three houses established utility consumption goals for their children. There may have been interference with the combination phase.

There was also the possibility of an order effect of experimental conditions, which Hayes and Cone (1977) have attempted to address. In applied research aimed specifically at the solution of an acute problem on a large scale (i.e., expense due to overconsumption of utilities), it can become necessary to proceed somewhat differently from the optimal methods. The particular program studied (CYDA) has found the manual/quiz—feedback approach very successful in the control of a variety of maladaptive behaviors. In light of the legal/ethical restrictions placed upon conducting research on the adolescent population (Indian and Caucasian), the CYDA administration desired the present method to be employed. Future research in this area should account for potential ordering effects in the experimental design.

The results of the present study have indicated that adolescent delinquents could be made aware that their actions do have an effect upon important factors related to their care. It was also found that both providing a manual describing energy conservation techniques and informing them how they are doing and how they could improve were effective in reducing the overall level and pattern of utility consumption, as well as the expense involved in their care.

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Appendix I

HOME MANAGEMENT SKILLS

VI. ENERGY AND WATER CONSERVATION

DEFINITION

A significant portion of most families budgets is dedicated to pay utility bills. The cost of operating necessary home appliances and services has been on the increase for the past few years and there are indications that these increases will persist for some time to come. It is, therefore, becoming indispensable for everyone to discover ways to conserve energy so that utility bills can be maintained within reasonable limits. By learning to save money on water and energy usage students at CYDA acquire a practical skill that will eventually benefit them once they graduate from the program. A series of hints and procedures are provided in this package that will enable both teaching parents and students at CYDA residential settings to reduce the amount of their utility bills.

SKILL COMPONENTS

Components of the energy conservation skill are determined by a reduction in usage of diverse sources of energy in the home. Steps are provided in each case to operate services and appliances at a minimum cost.

1. Stove and Oven

   a. Use the lowest electric setting or gas flame necessary to prepare a meal. High oven or burner settings are more expensive and in most cases not necessary.

   b. Cover sauce pans when cooking. The food cooks faster and less expensively.

c. Do not overextend pre-heating periods. An oven only needs about 10 minutes of pre-heating to reach any preset temperature.

d. Remember to turn off stove burners and oven immediately after their use.

2. Refrigerator and Freezer

a. Do not put warm or hot food in the refrigerator. Let the food cool outside the refrigerator first.

b. Defrost the refrigerator regularly once per month. Never use an ice pick, knife, or other sharp item when defrosting for they might puncture a cooling tube.

c. Defrost the freezer regularly once every two months.

d. When storing food in the refrigerator allow sufficient space around food containers for good air circulation. Be sure not to block the air vents.

e. Do not keep the refrigerator door open. If several items are to be taken out to prepare a meal remove them all at once rather than opening the door several times.

f. Clean dust and lint accumulated in the coils at the rear of the refrigerator once per week. Preferably use a piece of dry cloth or vacuum cleaner since moisture has the effect of solidifying dust and lint to the coils.

3. Washer and Dryer

a. Clean washer and dryer filters once per week otherwise the water - air circulation is interrupted.

b. Wash only a full load of clothes. In top loading machines. Clothes should be stacked lightly reaching just to the rim of the tub. In front loading machines clothes should be stacked lightly about halfway up to the door opening.

In any event, clothes should circulate freely without overworking the machine.

c. Follow washing instructions listed on the machine in terms of fabrics, colors, and degree of soiling.

d. Never use the dryer for foam rubber or plastic items.

e. Empty all pockets before putting clothes in the dryer. Loose objects can clog the drain, jam the pump, or burn out a motor.

4. Heating and Cooling

a. Do not adjust thermostat setting. Set it and leave it alone.

b. During the Summer: Set the thermostat at 72°. Close the draperies during the day on windows receiving heavy sunlight. During the Winter: Set the thermostat at 68°. Open the draperies to allow sunlight.

c. If everybody leaves the house for more than 4 hours adjust the thermostat 10° higher during the summer and 10° lower during the winter.

d. Keep the doors and windows closed whenever the thermostat is operating.

e. Keep damper closed when fireplace is not in use, or block the opening with a movable cover.

f. Keep heating and cooling vents free from obstruction.

g. Clean the furnace and cooler filters once a month.

5. Miscellaneous

a. Turn off all lights when not in use.

b. Do not leave radio, TV, or stereo on if there is no one to enjoy them.

6. Water Conservation

a. Make sure all faucets are turned off immediately after they have been used.

b. Report any leaks to the home supervisor for repair.

c. Limit showers to a maximum of ten minutes using only warm, rather than hot water.

d. Do not let water run while brushing teeth. Instead, use water for cleaning the tooth brush and mouth wash.

e. Do not leave water running outside the home unattended.

f. Drain water from heating unit once per month to prevent calcium formations in the tank. Absence of calcium formations enhances water heating and increases longevity of water heater.

RATIONALES

1. Makes students aware of one of the most pressing problems in home management, family budgeting, and Energy and Water Conservation.
2. Teaches students not to be wasteful and saves money on energy usage.
3. Reduces the cost of program operation allowing allocation of saved money into other important areas.
4. Provides students with hints on energy conservation that will be useful to them after graduation from the program.

QUIZ ON ENERGY AND WATER CONSERVATION

1. Stove and Oven

   a. In order to prepare a meal use the _____ electric setting or gas flame.

   b. When cooking _____ sauce pans.

   c. An oven needs only about _____ minutes of pre-heating to reach any preset temperature.

   d. _____ _____ stove burners and ovens immediately after their use.

2. Refrigerator and Freezer

   a. Do not put _____ or _____ food in the refrigerator.

   b. _____ the refrigerator regularly once per month.

   c. _____ the freezer regularly once per month.

   d. When storing food in the refrigerator allow sufficient _____ around food containers for good _____ _____.

   e. Do not keep the refrigerator door _____.

   f. Clean lint and dust off coils at the rear of the refrigerator _____ _____ _____.

3. Washer and Dryer

   a. Clean washer and dryer _____ once per week.

   b. Wash only a _____ load of clothes. Clothes should circulate _____.

   c. Follow washing _____ listed on the machine.

   d. Never use the dryer for _____ _____ or _____ items.

   e. Empty all _____ before putting clothes in the machine.

4. Heating and Cooling

   a. Do not adjust the _____.

   b. During the summer, set the thermostat at _____, during the winter, set the thermostat at _____.

   c. When everybody leaves the house for more than 4 hours adjust the thermostat _____ _____ during the summer and _____ _____ during the winter.

d. Keep the windows and doors _____ whenever the thermostat is _____.

e. Keep damper _____ when fireplace is not in use or _____ the opening with a movable cover.

f. Keep heating and cooling vents _____ from obstruction.

g. _____ the furnace and cooler _____ once a month.

5. Miscellaneous

a. _____ _____ all lights when not in use.

b. Do not leave radio, TV, or stereo _____ if there is no one to enjoy them.

6. Water Conservation

a. Make sure all faucets are _____ _____ immediately after they have been used.

b. Report any _____ to the home supervisor for repair.

c. Limit showers to a maximum of _____ minutes.

d. Do not let _____ _____ while brushing teeth.

e. Do not leave water _____ outside the home unattended.